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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,387

07/20/2005

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04305/0202820-US0

5182

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7590

05/27/2009

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EXAMINER

EOFF, ANCA

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

05/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/533,387	Applicant(s) HJELMROTH ET AL.	
	Examiner ANCA EOFF	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-16,18-40 and 42-51 is/are pending in the application.
- 4a) Of the above claim(s) 18-32 and 42-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-16 and 33-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1, 2, 4-16, 19-40 and 42-51 are pending in the application, with claims 18-32 and 42-51 withdrawn from consideration. Claims 3, 17 and 41 have been canceled.
2. The foreign priority document PA 200201633, filed in Denmark on October 28, 2002 was received and acknowledged.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1, 24-8 and 33-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 recites the limitation of a "dried and hardened aqueous ink".

It is known that a dried and hardened ink does not contain carrier fluid, such as water in this case. Therefore, it is not clear what is the applicant claiming as his invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1, 2, 4-6, 8-13, 15-16 and 33-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cottrell et al. (WO 00/29493) in view of Kellett (US Patent 5,738,013).

With regard to claims 1, 9 and 37, Cottrell et al. disclose a process of making a patterned film on a substrate, said process comprising the steps of:

- applying to the substrate an mixture comprising a precursor for crosslinked acrylic polymer, and
- curing the mixture to form a patterned crosslinked acrylic polymer film coating on the substrate (abstract and page 4, lines 28-38).

The mixture comprising a precursor for crosslinked acrylic polymer is referred to also as ink (page 17, lines 5-10).

The precursor for crosslinked acrylic polymer has been obtained from the polymerization of one or more alefinically unsaturated monomer(s) with water dispersing group in the presence of one or more olefinically unsaturated monomer(s) which are free from water dispersing group(s) (page 6, lines 16-20 and page 9, lines 17-19).

Examples of water dispersing groups include carboxylic acid groups (page 8, lines 12-15) and examples of unsaturated monomers providing dispersing groups include methacrylic acid (page 10, line 18-19).

The preferred olefinically unsaturated monomers which are free from dispersing groups include methacrylamides (page 11, lines 3-4), such as methyl methacrylamide, tert-butyl methacrylamide (page 11, lines 31-36).

While Cottrell et al. do not specifically disclose a copolymer of methacrylic acid and a methacrylamide, it would have been obvious to one of ordinary skill in the art to obtain such a copolymer, based on Cottrell's teachings regarding the monomers which form the precursor for crosslinked acrylic polymer and the examples of such monomers.

A copolymer comprising methacrylic acid and a methacrylamide is equivalent to the copolymer with acid groups, wherein at least one of said groups has been converted to the corresponding amide and comprising unamidized groups of the instant application.

Cottrell et al. further disclose that the mixture/ink comprising a precursor for crosslinked acrylic polymer preferably has water as liquid media (page 17, lines 11-13 and 28-29). This is equivalent to the aqueous ink of the instant application.

Cottrell et al. further disclose that the curing takes place at a temperature preferably between 150°C and 230°C for 5-45 minutes (page 15, lines 8-11). This curing step is equivalent to the drying and heating step performed at 170-220°C, preferably 190-210°C in the instant application, as taught on page 9, lines 14-16 of the specification.

Cottrell et al. also teach that the printed substrate may be dried by heating or air drying to ambient temperature before the curing (page 15, lines 26-28).

Cottrell et al. teach that the process of forming patterned film on a substrate may be applied for the production of a color filter (abstract) and may also give patterned coatings on substrates in general (page 14, lines 33-35).

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The process of Cottrell et al. uses polymeric ink of good operability which can be reliably and economically applied, optionally in a single pass, to a substrate to form a resistant, patterned acrylic polymer film (page 4, lines 14-17)

Cottrell et al. also disclose that the substrate may be metal (page 21, lines 13-14) but fail to specifically teach that the process may be applied for the production of printing plates.

However, it is known in the art that printing plates may be obtained by inkjet printing with an ink jet fluid material, as shown by Kellett in the abstract and column 3, lines 23-25.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to produce printing plates in the process of Cottrell et al., in order to take advantage of the features of the process of Cottrell et al. (the process uses polymeric ink of good operability, is reliable and can be economically applied, optionally in a single pass, to a substrate to form a resistant, patterned acrylic polymer film).

Claims 2 and 10 are product-by-process claims.

Claims 2 and 10 refer to the amide monomer of the polymer of claims 1 and 9 and introduce the limitation "wherein the amide is made from an amine selected from the group consisting of ammonium, an alkyl amine and a dialkyl amine" The process limitation does not give any patentable weight to the claimed product.

"[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art,

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the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985)

Since Cottrell et al. teach a copolymer comprising methacrylamide and methacrylic acid units as component of the ink-jetable composition, it is the examiner’s position that the copolymer comprising methacrylamide and methacrylic acid units of Cottrell et al. is identical to the polymer in the instant application. In the alternative, the polymer of the instant application is obvious over the copolymer comprising methacrylamide and methacrylic acid units of Cottrell et al.

With regard to claims 4 and 11, Cottrell et al. disclose methacrylic acid monomers (page 10, lines 17-18)

With regard to claims 5, 12, 34-35 and 38-39, Cottrell et al. disclose that the precursor for crosslinked acrylic polymer should have a weight average molecular weight of less than 200,000 (page 5, lines 10-11). This range encompasses the ranges of the instant application.

With regard to claims 6 and 13, Cottrell et al. further disclose that the mixture comprises a colorant, preferably in an amount of 2-8 parts by weight (page 19, line 13). This is equivalent to the coloring agent of the instant application.

With regard to claims 8 and 16, Kellett discloses that the support for printing plate may be aluminum (column 6, lines 17-24).

With regard to claims 15 and 40, Cottrell et al. further disclose that the curing takes place at a temperature preferably between 150°C and 230°C (page 15, lines 8-11). This curing step is equivalent to the drying and heating step performed at 170-

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220°C, preferably 190-210°C in the instant application, as taught on page 9, lines 14-16 of the specification.

With regard to claims 33 and 36, Cottrell et al. further disclose that the substrate may be metal (page 21, lines 13-14).

7. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cottrell et al. (WO 00/29493) in view of Kellett (US Patent 5,738,013) as applied to claims 6 and 13 above and in further view of Bates et al. (US Patent 5,958,999).

With regard to claim 7, Cottrell modified by Kellett teach the printing plate of claim 6 (see paragraph above). Cottrell et al. further disclose that the ink for inkjet printing may comprise a pigment (page 13, line 24) but fail to disclose the type of pigment.

Bates et al. teach ink compositions and methods of generating images on a substrate with said ink compositions (abstract). Bates et al. further disclose that a pigment for inkjet inks may be cobalt blue (column 2, line 23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use cobalt blue as pigment in the ink composition of Cottrell, such pigment being taught by Bates et al. to be used in ink jet inks.

Response to Arguments

8. Applicant's arguments with respect to claims 1, 2, 4-16 and 33-40, filed on February 04, 2009 have been considered but are moot in view of the new grounds of rejection.

In response to the applicant's arguments, the examiner would like to note that:

- The rejection of claims 1, 2, 4-14, 16 and 33-39 under 35 USC 102(a)/35 USC 103(a) over Nakazawa et al. (US Pg-Pub 2002/0023566) is withdrawn following the applicant's amendment to claims 1 and 9.

- The rejection of claims 15 and 40 under 35 USC 103(a) over Nakazawa et al. (US Pg-Pub 2002/0023566) in view of Frenkel et al. (WO 01/34394) is withdrawn following the applicant's amendment to claims 1 and 9.

However, new grounds of rejection are shown in paragraphs 3-7 above.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANCA EOFF whose telephone number is (571)272-9810. The examiner can normally be reached on Monday-Friday, 6:30 AM-4:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/A. E./

Examiner, Art Unit 1795

/Cynthia H Kelly/

Supervisory Patent Examiner, Art Unit 1795